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POLITICAL SCIENCE QUARTERLY.

A PERMANENT CENSUS BUREAU.

THE census of the United States is a stupendous example of the fatuity of paying generously for the attainment of a certain object, and then neglecting the practical means by which alone it can be attained. We appropriate enormous sums of money, we employ thousands of clerks, we issue tons of printed matter, our officials fume and sweat under their burdens, Congress passes supplementary acts, one after another — only to have the whole undertaking break down through the defects in the administrative machinery which simple common sense ought to have remedied. The census of 1870 was conducted under the antiquated and entirely insufficient law of 1860. In 1880 the law was changed ; but so much was then undertaken that the office broke down, great delay ensued in publishing the results, and part of the data collected was not even tabulated. In 1890 great promises were made that the scope of the work should be reasonably restricted, that the material should be elaborated with scientific care, and that the results should be quickly made accessible. These promises have not been fulfilled. Notwithstanding improved methods of tabulation and an expenditure of money unparalleled in the census work of any country, we are going through the same old experience — volumes filled with non-census matter, and insufferable delay in printing the really important facts. A single miscalculation of this sort might be excusable ; but to repeat it, decade after decade, argues not only gross extravagance but lack of administrative ability.

The reason for the failure of our decennial censuses has been pointed out again and again. It is impossible at a moment's notice to improvise a great scientific bureau, able to carry the burden which the census imposes upon it. When this impossibility is attempted, the work is ill done, and the experience gained is thrown away by disbanding the office just as it has learned something. Both theorists and practical statisticians, such as Walker, Wright and Porter, have repeatedly emphasized this fatal weakness in our system. Congress, at last aroused, has recently instructed the Commissioner of Labor to report for its consideration, as soon as practicable, a plan for a permanent census service. The American Economic Association and the American Statistical Association have, moreover, appointed committees to urge upon Congress the necessity of improved census methods. With such unanimity of opinion in regard to the desirability of reform, it is to be hoped that something will be accomplished, and that we shall approach the census of 1900 with adequate technical equipment and scientific organization.

The attainment of more accurate and quicker results is not, however, the only problem connected with the establishment of a permanent census bureau. Discussion of the proposed reform brings up at once the whole question of the statistical activity of the federal government; and that involves the consideration of the abundance and trustworthiness of the material, at the most important source of supply, for the study of social and economic conditions in this country. This question is of importance not only to economists and sociologists, but also to publicists and statesmen, to social reformers and philanthropists, to business men, and to all others interested in the economic and social condition of the country. Passing by, therefore, the consideration of the technical organization of such a service, with which the officials at Washington are competent to deal, I purpose to point out briefly some of the scientific advantages to be attained.

There has been much dispute as to whether the statistical activity of a government should be directed solely by adminis-

trative considerations of the usefulness of the statistics for directing state action in the narrow sense, or whether an effort should be made to gather information solely or predominantly of scientific interest. In many cases the two functions are combined. Thus, the enumeration of the population of the United States is primarily for the purpose of assigning representatives; but the minute classification of the people, according to race and nationality, birthplace and nativity, sex, age, conjugal condition, *etc.*, is for scientific purposes and sociological information. Again, the statistics of imports and exports are the direct result of the activity of the Treasury Department, and form a basis for taxation and tariff legislation; but they are also of interest to the commercial world and to the student of economics. The statistical office must meet the first requirement, and in all civilized countries strives as far as possible to meet the second. The interesting problem for us is to decide how far it is possible to meet the second without neglecting the first, and what is the best organization for doing it.

The statistical activity of governments seems to have been inspired at first mainly by administrative reasons. Military and financial considerations led to an enumeration or estimate of the number of the people, or to a description of landed property and the status of the owners and occupiers. Block¹ says that Sully organized in France, towards 1602, "un cabinet complet de politique et des finances," which may be considered as the first bureau of statistics. The reports demanded by Sully embraced the condition of the army, of the marine, of the finances, and of a great number of branches of administration. Louis XIV, toward the end of his reign, demanded from his intendants detailed memoirs concerning the condition of the provinces, including their population, finances, industry, *etc.*, and the collection in manuscript filled forty-two volumes. François de Neuchateau, Minister of the Interior, organized in 1796 a bureau of statistics, but it does not seem to have survived the changes of the revolutionary period. Under the Restoration, the Ministry of War commenced a useful publication concerning

¹ *Traité de Statistique.*

the recruitment of the army. In 1819 the bureau connected with the administration of the customs was reorganized, and began to publish facts in regard to commerce. In 1825 a bureau for judicial statistics was founded; and in 1834 the "bureau de statistique générale de France" was created and attached to the Ministry of Commerce. Besides these Block enumerates a "bureau des subsistances" attached to the same department; a bureau of statistics of mines and one of railways, founded in 1846, both attached to the Ministry of Public Works; a bureau of statistics of education, 1876; and a central bureau of statistics of finance, founded in 1877. The history of France thus shows the way in which successive departments tried to collect and make use of the statistical information which came to them in the course of their work. A precisely similar line of development may be traced in England; and the recent article of Mr. Carroll D. Wright, on "Contributions of the United States Government to Social Science,"¹ shows how the various departments of the federal government are engaged in collecting, each in its particular domain, a vast mass of information.

It is true that side by side with these administrative statistics others have been collected which we may say are primarily of scientific interest. The most significant step in this direction was the establishment of the Registrar-General's Office in England (1834), which has been very active in collecting statistics of births, deaths and marriages. Although all of these phenomena are in a way of importance to the administration, they are primarily of sociological interest. In the same way, the expansion of the schedules of our decennial census has been in the interest of science rather than from any direct administrative demand. The epoch-making occasions in this respect were the censuses of 1850 and of 1880. So, too, the establishment of the Department of Labor (1886) may be said to be a distinct recognition of the claims of scientific statistics. The still more recent establishment of a Bureau of Labor in France and of the Labor Department of the Board of Trade in England may be cited as indications of the same tendency.

¹ American Journal of Sociology, November, 1895.

It is only recently, however, that so much attention has been paid to the demands of science, or rather of the general public. All through the middle of this century a great many complaints were heard that administrative interests were so exclusively in the minds of governmental officials that scant attention was paid to making the statistics of value to science. Traces of this discussion are to be found in the proceedings of the statistical congresses, in the parliamentary Blue Book of 1874 and in the long controversy waged among statisticians over the question of the centralization or decentralization of the work of taking statistics. The latter question still remains unsettled, or rather it is gradually working out its own settlement in practical compromises adapted to the administrative organization of each state. This question is, however, so closely related to the one we have before us that it will not be irrelevant to glance at the issues involved.

By decentralization is meant the historic system by which each department collects those statistics which are of direct interest to it, and in the form which is most useful for it. In favor of this system it is urged that each department is cognizant of its own needs; that each has the facilities for doing the work, generally in connection with its administrative activity and without extra expense; and that each has a practical knowledge, which no purely statistical department can have, of what is possible in the way of fulness and accuracy. A modern instance of the application of this line of reasoning is the action of the Interstate Commerce Commission in appointing its own statistician; and there are strong arguments in its favor.

By centralization is meant the establishment of some sort of central office which shall either gather the statistics itself and then distribute them, so to speak, to the various departments and to the legislature as they need the information, or shall, at least, exercise some sort of control over the various administrative departments, so that the whole statistical activity of the government shall be conducted on uniform, consistent and scientific lines. This may be done either by a central bureau taking the raw statistical material from the departments and

attending to its tabulation and publication, or by a central office or commission prescribing the schedules which shall be used by the departments. Information collected by one department may thus be made useful to another whose wants are known to the central office and not to the other department. The general interest of science may be guarded by placing in the central commission some theoretical as well as practical statisticians, who can indicate the way in which by common arrangement and special manipulation the most can be made out of the material.

The advantages of some such central control are as follows: It would prevent a great deal of duplication. In some cases, different departments now collect and publish the same information or fragments of information pertaining to the same subject. Thus in England mortality statistics of the army, of the navy, of the metropolitan police and of convict prisoners are reported by different departments. Many departments, moreover, have zeal enough to collect and publish a great deal of information which is not of direct interest to them; but it is useless because it is fragmentary and buried in obscure departmental reports which never come to the knowledge of the public. In the parliamentary report (1874) already mentioned, Mr. Robert Giffen said that the statistical publications of Great Britain covered 29,543 pages, of which 12,479 pages were repeated annually, and of these latter 7,216 pages were of doubtful value. I am not aware that any one has had the courage to make a similar estimate of the mass of the statistical publications of the United States or to characterize them according to their value. Such statistics of statistics, if undertaken by one of our expert officers familiar with the material, would be of the highest value and would furnish a fitting critical supplement to Mr. Wright's account of the "Contributions of the United States Government to Social Science."

The mere mass of material furnished by our government is sufficiently formidable; but when we remember that it is scattered through hundreds of reports and mixed up with thousands of pages of other matter, it becomes simply unworkable. For

example, during the fiscal year 1893-94 our Department of Agriculture issued 205 publications, embracing 10,512 pages of printed matter ; and of these publications, 3,169,310 copies were printed.¹ Contributions to social science dumped on us in this way can be of little service.

The usefulness of material like this may be impaired not only by its mass and its scattered condition, but also by such lack of uniform classification as to render impossible the continuation of the same sociological inquiry from one department to another. For instance, it was shown at the time of the official investigation in England that if one wanted to learn the condition of the juvenile male population of Great Britain, — comparing, say, the numbers and death-rates of those under the age of fifteen, who were paupers, prisoners or idiots, or who were in schools, reform schools, factories or coal mines, — he would be stopped at once by the different age classifications adopted in the different reports. Thus he would find the following classifications:

Total number, classified by each year of age and by sex.

Deaths, by each year up to 5 and then by quinquennial periods.

Paupers, as under 16 and over 16. Sex not given.

Education, by percentage of each age up to 14. Sex not given.

Present at school examinations, as under 10 and over 10.

Committed to prisons, as under 12, 12-16, 16-21, 21-30, by decennial periods to 60, as 60 and over.

Inmates of convict prisons, as under 15, by decennial periods to 65, as 65 and over.

Inmates of reform schools, as under 10, 10-12, 12-14, 14-16.

Inmates of industrial schools, as 6-8, 8-10, 10-12, 12-14.

Criminals known to the police, as under 16 and above 16.

Police returns: For London, persons convicted, as under 15, by quinquennial periods to 60, as 60 or upwards; for Liverpool, persons apprehended, as under 10, 10-12, 12-14, 14-16, 16-18, 18-21, 21 and over; for other chief towns, *e.g.*, Manchester, persons taken into custody, as under 10, 10-16, 16-20, 20-30, 30-50, 50 and over.

Emigrants, as under 1 year, 1-12, 12 and over.

Factory hands, as under 13, 13-18, over 18.

¹ See Mr. Wright's article already mentioned.

Persons injured in factories, as children, young persons and adults.

The classification in Scotland and Ireland, moreover, differs in many respects from that in England.

From these reports all that we can learn of males under the age of fifteen is the total number, the number of deaths, the number in convict prisons and the number convicted in the courts of London.

A second example of conflicting classifications is found in the financial reports, where the different departments adopt different fiscal years, ending respectively on Lady Day (March 25), Easter, Michaelmas (September 29), May 30, August 31, December 31 and other dates.

As this investigation was made twenty years ago, things may have improved in England since then — but it is doubtful. Each department probably had good and sufficient reason for adopting its particular classification; and no one was at hand to consider the interests of the outside public and of science. In many cases, however, a little more elaborate classification could have been made without much trouble, and then the figures would have been useful for other purposes besides the immediate needs of the department. Although a central commission or committee was proposed, nothing, so far as I know, ever came from this investigation. It was said that if such a committee were composed of the heads of bureaus, official courtesy would prevent their interfering with each other's plans; while if it were composed of outsiders, it would be almost impossible for it to enforce its wishes on officials busied with more important affairs and wedded to the routine of their departments. The English official statisticians, in fact, regard with something akin to horror the demands of the so-called theorists, and are never weary of pointing out how imperfect the statistical method is. They have nevertheless been compelled to yield a little, as seen in the recent attempt to meet the wishes of the economists in more careful statistics of occupations. Furthermore, Von Mayr sees in the expansion of the statistical department of the Board of Trade a step in the direction of unifying

and extending the statistics of social condition, — that is, sociological as distinguished from administrative statistics.

If we turn to the United States, the disadvantages of decentralization are sufficiently evident in our administrative statistics. We have at Washington a number of statistical bureaus, each generally attached primarily to some one department and its activity depending largely upon the zeal and energy of its chief. The bureau of the Treasury Department, from its age and the importance of the material passing through its hands, has perhaps had the most prominent position; while the Department of Labor, on account of the wide scope of its powers, the investigations confided to its care and the reputation of its head, occupies a unique place which is extremely difficult to define. Neither is officially or actually the central bureau of statistics of the United States; while particular bureaus, such as those of the Department of Agriculture and of the Interstate Commerce Commission, perform important functions. It is unnecessary to dwell upon the further decentralization represented by the state bureaus of labor statistics, the boards of health of the various commonwealths and the bureaus of vital statistics of large cities, for such decentralization is inseparable from our form of government. That it is not an unmixed evil is proved by the excellent work of the Massachusetts Bureau of Statistics of Labor and the censuses of that state, which embody some of the very best work ever done in statistics in this country.

With all this decentralization we have in the United States the most marked example of centralization which the world has ever seen — the decennial census. It is centralized in the sense that its organization is entirely independent both of local officers and of other departments. It is entirely self-centered and self-contained. Its material is collected and worked up at Washington through its own officers, and the results are published in independent volumes without regard to the other publications of the government. Its report on agriculture has no connection with the activity of the Department of Agriculture; its reports on transportation are independent of the

Interstate Commerce Commission ; and that on the precious metals, of the director of the mint. Again, it is centralized in the sense that everything of statistical interest is included within its purview. It covers the statistics of population (the ordinary field of a census), of agriculture, trade, manufactures, public and private debts, mineral resources, mortality and vital statistics, and so on. It attempts to combine two functions : first, that of a decennial survey of the population and the resources of the United States ; and, second, that of a registration of the continuous movement of population and the social and economic activity of the community — as, for instance, when it calculates birth, marriage and death-rates, the movement of mortgage indebtedness during the decade, the mineral products by years, *etc.*

In the performance of both of these functions the efficiency of the census is lessened, and, in the case of the second, its results are rendered almost valueless, if not positively misleading and hurtful, by the third form of centralization, namely, that of time. Under our present system, all of this activity must be compressed into a few months. Once in ten years this survey must be made down to its minutest details, and the continuous movements must be calculated from the information that can be gathered at that time from records or from the memories of individuals. It is needless to say that in this respect we have pushed concentration too far, for no statistical organization in the world could stand such pressure. The mass of the material is too enormous to be thus handled with the best results. Delays are inevitable, and thus the information is not available until much of it is out of date. For recording the continuous movements, this method is ridiculously inadequate and nullifies the most conscientious efforts on the part of the officials. Our decennial census is undoubtedly a monumental affair, but it is a monument of wasted effort and money as well as of skill and knowledge. Men no longer build earth mounds in efforts to rival the size of nature's hills, or pyramids simply to show how one stone can be put on top of another : they construct works of

architecture for the purpose of ameliorating the conditions of human life or adding to the resources of civilization, trying to obtain the greatest usefulness and beauty with the least expenditure of effort. As regards adaptation of means to ends, our census and our financial legislation are two things difficult to explain to the scientific mind.

The establishment of a permanent census bureau seems to be in the natural line of development and the best solution of these difficulties. This would, at the very least, give us an organized force and office facilities for dealing with the decennial enumeration. It seems possible, also, that part of the work now crowded into the census year might be distributed so as to fall at other times, thus relieving the pressure upon the bureau at the time of the enumeration and furnishing continuous employment to the permanent staff. All those investigations which are carried on mainly by expert agents could certainly be arranged for in this way. There seems to be no reason why a great part of the inquiries about industrial affairs would not be equally valuable if made to fall in the years between the censuses. The main figures might then be carried forward or backward so as still to give us a general survey of the resources of the country at the time of the census proper. Special investigations, moreover, might be undertaken by direction of Congress or on the initiative of the bureau itself; and much more care could be exercised both in preparing for such work and in exploiting the material itself. Furthermore, under such conditions, we should probably find that the attitude of the census officials would be modified in respect to undertaking new work. Under the present system it is inevitable that the superintendent should resist enlarging the schedule, already so unwieldy. He is obliged to do it in self-defense.

It seems scarcely worth while to debate the question whether Congress has the power to create a bureau of this sort. The vast expansion of the inquiries of the census beyond the simple enumeration of the people contemplated by the clause of the constitution providing for the distribution of representatives and direct taxes, and the sweeping powers exercised by the

Department of Labor, together with the practice of all civilized nations, seem to answer that question. Moreover, with the growing interest in sociological inquiries the legal power to compel answers to questions will be less and less important, especially in the case of a permanent office whose chief would be a responsible man actuated only by scientific motives and jealously guarding any information of a private nature.

It is to be observed, in conclusion, that a permanent census bureau would solve the question of centralization or decentralization. It would gather to itself such statistical activity as is of a scientific rather than of an administrative nature. It would not necessarily do all the work of gathering the material; for where the departments could do that better or cheaper, it might well be left to them. But the central office could appropriate the results, in some cases supplement the observations, and bring all the sources of information together in such a way that our present inadequate and fragmentary observations of social life would be systematized and might perhaps one day deserve to be called "scientific."

RICHMOND MAYO-SMITH.